Amendment to the Claims:

1. (Currently Amended) A method of determining the position of a patient in ~~an~~ reconstructed diagnostic image, the patient being located on an examination table in an imaging region, the method comprising:

providing a pattern of marking elements that are individually not visibly evident ~~individually in~~ to a computer system and to a human viewer of the diagnostic image;

attaching the pattern of marking elements to at least one of the patient that is being imaged and the examination table; and

obtaining the image.

2. (Currently Amended) [[A]] The method as claimed in claim 1, wherein the position of the marking elements in the image is determined with a pattern matching routine by a correlation of the image with at least one filter image ~~of~~ which indicates the pattern of the marking elements.

3. (Currently Amended) [[A]] The method as claimed in claim 2, wherein the filter image of the pattern is transformed relative to the actual pattern of the marking elements.

4. (Currently Amended) [[A]] The method as claimed in claim 1, wherein the image is generated by means of radioscopy, and the marking elements exhibit a low absorption of the X-rays, the effect of which lies within the noise level of the X-ray image.

5. (Currently Amended) [[A]] The method as claimed in claim 1, wherein the position of at least one further object is determined in the image, wherein a second pattern of marking elements, which do not show up individually in the image, is attached to the further object, and wherein the second pattern is different from the first pattern.

6-8. (Cancelled)

9. (Currently Amended) An X-ray system, comprising

an X-ray source generating X-rays along a ray path;

an X-ray detector, which is disposed in the ray path of the X-ray source;

a data processing unit which reconstructs an output of the detector into an x-ray image;

at least one marking device for attachment to at least one of a patient located in an imaging region between the X-ray source and the X-ray detector and an examination table on which the patient is supported in the imaging region ~~in order to determine the position of the patient in an X-ray image, wherein the marking device comprises marking elements, which are not visibly evident individually in the X-ray image~~, the marking device including a radiotranslucent sheet which carries a pattern of a radioopaque marking elements of a size, a shape, and a material which exhibits low absorption of the x-rays, the effect of which lies within a noise level of the x-ray image; and

~~a data processing unit for calculation of the position of the marking elements of the marking device in an image generated with the x-ray system~~ wherein the data processing unit further processes the x-ray image with a filter mask which replicates the pattern of the marking elements to reveal the pattern.

10-11. (Cancelled)

12. (Currently Amended) The X-ray system as claimed in claim ~~11~~ 9, wherein said pattern is a two dimensional, cyclical ~~binary~~ maximum length sequence.

13-17. (Cancelled)

18. (Currently Amended) [[A]] The method as claimed in claim 1, further comprising:

forming the pattern of marking elements with a combination of a size, a shape, and a material that renders the marking elements not visibly evident individually in the image to a machine viewer.

19-20. (Cancelled)

21. (New) The method as claimed in claim 1, wherein the marking elements appear in the diagnostic image as a watermark which is invisible in image analysis and does not distort or impair the diagnostic image.

22. (New) The method as claimed in claim 1, wherein the step of obtaining the image includes:

projecting an x-ray beam through the patient and the pattern of marking elements;

receiving the x-ray beam with an x-ray detector that has a plurality of individual sensor elements of a common size;

reconstructing an output of the x-ray detector into the diagnostic image;

wherein the marking elements are sized to cover only one of the sensor elements.

23. (New) The method as claimed in claim 1, wherein radiation absorption of the marking elements is precalculated and further including:

using precalculated radiation absorption of the marking elements to correct degradation of the diagnostic image attributable to the marker elements.

24. (New) The method as claimed in claim 1, wherein the marking elements are carried on a mechanically flexible radiotranslucent layer and further including:

attaching the mechanically flexible layer to the patient; and

monitoring movement of the patient from changes in the pattern in the diagnostic images as the patient moves.

25. (New) The system as claimed in claim 9, wherein the marking elements in the reconstructed image are not individually apparent to a human or a machine in the reconstructed image.

26. (New) The system as claimed in claim 9, wherein the marking elements have a predetermined x-ray absorption and the data processing unit further after revealing the pattern, determines a location of each marking element from the pattern and corrects the image for the radiation absorption attributable to each marking element.

27. (New) The system as claimed in claim 9, wherein the x-ray detector includes a plurality of individual sensor elements and the marking elements are each sized to cover one of the sensor elements.

28. (New) The system as claimed in claim 9, translucent sheet is flexible.

29. (New) The system as claimed in claim 12, wherein the marking elements have N different absorption levels and the two dimensional, cyclical maximum length sequence is N-valent, where N is a plural integer.

30. (New) A method of determining a position of a patient in a diagnostic image, the method comprising:

attaching a pattern of marking elements which exhibit a low x-ray absorption level to at least one of a patient and a patient examination table;

passing x-rays through the patient and the pattern of marking elements;

from the x-rays that have passed through the patient and the pattern of marking elements, generating a diagnostic image;

wherein the x-ray absorption level of the marking elements is such that the marking elements alter a gray scale of corresponding pixels of the generated image to such a small degree that individual marking elements are not visibly evident in the generated image to a computer pattern recognition routine;

analyzing the generated image with the pattern recognition computer routine which recognizes the pattern of marking elements in the generated image and determines the position of the patient from the recognized pattern.

31. (New) The method as claimed in claim 30, wherein the individual marking elements in the generated image are not visibly evident to a human viewer.

32. (New) The method as claimed in claim 30, wherein the x-ray absorption level of the marking elements lies within a noise level of the x-ray image.